REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

In response to the formality-based objection to claims 1-24, all claims have been reviewed and amended above so as to ensure full recitation of prior antecedent basis with respect to the first and second external hardware interfaces/ports, etc.

Accordingly, all outstanding formal issues are now believed to have been resolved in the applicants' favor.

The rejection of claims 1-24 under 35 U.S.C. §102 as allegedly anticipated by Thakur '306 is respectfully traversed.

Although Thakur '306 does appear to be closer prior art (e.g., it at least relates to a separate device from the computer to which it is connected), the Examiner continues to rely upon internal interfaces in an attempt to support the outstanding grounds of rejection. Although the claims are believed to have already been clear in this respect, the claims have been amended above so as to make it even more clear and undeniable that the applicants are claiming a device with external physical interfaces, etc.

One reason that the "Network Interface Card" of Thakur is fundamentally distinguished from applicants' claim 1, for example, is to note that claim 1 requires the claimed device to pass processed data exclusively from the processing means within the device to the second external hardware interface.

By contrast, Thakur '306 teaches that encrypted data may go either back into the computer or out onto the network. See, for example, the "transmit request" (Fig. 4A; 4:50 - 5:46) and a "loop back request" (Fig. 4B; 5:47 - 6:30). Even claim 1 of Thakur '306 includes this alternative feature as part of the claimed invention (e.g., see the "second pins...is to be forwarded to a memory of the computer system or to the computer network").

In short, a fundamental distinction between the teachings of Thakur '306 and the applicants' claimed invention is that the processed data (i.e., encrypted data) can go either to the network or back into the computer in Thakur. By contrast, applicants' claimed invention requires the encrypted data to be passed exclusively out of the device via the second external hardware interface. Accordingly, it is not possible for a hacker who may subvert the computer's operating system to obtain possession of both the unencrypted and encrypted versions of given data. As is well known, if a hacker is able to get both unencrypted and encrypted versions of the same data, then they might be able to compromise the secret encryption key.

As will be noted, all of applicants' claims require the cryptographically processed data to leave the device exclusively through a second external hardware interface (i.e., different from the first external hardware interface through which data arrives to be cryptographically processed).

With respect to the Examiner's specific argumentation, it appears that the Examiner attempts to equate the Thakur '306 cryptographic processor to the claimed "first interface" and the network interface processor to the claimed "second interface" of applicants' claim 1. However, applicants' first and second hardware interfaces are both external interfaces on the device so as to enable communication with other hardware. This distinction is already clear (e.g., see especially claim 13 and 24).

With respect to dependent claims 2 and 3, it is noted that both the claims require data format conversions prior to cryptographic data processing. Accordingly, contrary to the Examiner's argumentation, it is impossible for the Thakur cryptographic processor to anticipate such claimed features.

With respect to claim 4, the signals referred to by the Examiner mark the beginning and end of a packet -- they in no way identify a packet because they are the very same identical markers for each and every packet. Accordingly, claim 4 cannot possibly be anticipated either.

Similarly with respect to dependent claim 5, the end and beginning markers of a packet in no way distinguish between packets. Accordingly, it cannot possibly follow that rules for handling different packets are inherently disclosed merely because beginning and ending packet markers are present.

With respect to claim 7, contrary to the Examiner's allegation of inherency, there is simply no disclosure of any rule store and certainly no suggestion that a rule store could be updated from the network side of the device.

Similar comments are obviously applicable in traversal of the Examiner's argumentation with respect to other claims 9-24. Indeed, claim 24 specifically requires a plug connector on the apparatus housing. How can an internally soldered connection between pins on a chip and lines etched on a circuit board possibly correspond to the claimed plug connector?

In short, although Thakur '306 is probably more relevant than prior art earlier relied upon, it is also impossible for this reference to in any way teach or suggest the applicants' claimed invention. Some exemplary reasons for this impossibility are noted above.

Accordingly, this entire application is now believed to be in allowable condition and a formal notice to that effect is respectfully solicited.

Respectfully submitted,

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